What is claimed is:

1. A modularized classifier receiving raw input data having a plurality of features comprising:

a plurality of class specific modules, each class specific module having a feature calculation input, a feature calculation section, a feature calculation output, a correction input, a correction section and a correction output, said class specific modules being arranged in chains of class specific modules having at least one class specific module, each chain being associated with one class, whereby the first class specific module in the chain of class specific modules receives the raw input data at the feature calculation input and a null value at the correction input, and the feature calculation input and the correction input of each intermediate class specific module in the chain is joined to the corresponding output of the preceding class specific module in the chain;

at least one probability density function evaluation module for each class joined to the feature calculation output of the last module in the chain of class specific modules, said at least one

probability density function evaluation module having an evaluation output;

a combiner for each chain joined to the evaluation output of the probability density function evaluation module for the class and to the correction output of the last class specific module in the chain of class specific modules, said combiner providing a combined output of the correction output and the evaluation output; and

a compare module receiving the combined output from each combiner associated with each class, said compare module having a comparator output which outputs a signal indicating that the combiner output received is of the class associated with the combiner providing the combiner output having the highest value thus indicating the class of the raw input data.

2.   The system of claim 1 wherein the correction section of each class specific module utilizes a variable reference hypothesis to optimize the numerical precision of the correction section.

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3. The system of claim 2 wherein:

said combiner is a summer; and

said correction section computes a log J-function which
is summed with the correction input and provided to
the correction output.

4. The system of claim 3 further comprising a thresholding
module positioned between each said combiner and said compare
module to receive the value, said thresholding module
eliminating all values below a predetermined threshold.

5. The system of claim 2 wherein:

said combiner is a multiplier; and

said correction section computes a J-function which is
multiplied with the correction input and provided to
the correction output.

6. The system of claim 5 further comprising a thresholding
module positioned between each said combiner and said compare
module to receive the value, said thresholding module
eliminating all values below a predetermined threshold.

7. The system of claim 1 wherein said plurality of class specific modules are selected from feature transformations including various invertible transformations, spectrograms, arbitrary linear functions of exponential random values, the contiguous autocorrelation function, the non-contiguous autocorrelation function, autoregressive parameters, cepstrum, order statistics of independent random values, and sets of quadratic forms.